Marco Sgarbi. *The Aristotelian Tradition and the Rise of British Empiricism: Logic and Epistemology in the British Isles, 1570–1689*. Dordrecht: Springer, 2013. Pp. xii+ 259. $179.00 (cloth).

Marco Sgarbi wants to rebut the view that British empiricism had its roots in a revival of Platonism. Instead, he insists, its roots were in the Paduan Aristotelianism of Jacopo Zabarella, inherited, embraced, and developed by a century of British writers. "Put simply, without the legions of forgotten British Aristotelians, there would have been no Locke, no Berkeley, no Hume" (234). To make his case, Sgarbi surveys British writers, forgotten and not, obscure and famous, and successfully shows that wherever you look in British philosophical writings from 1570 to 1689, you find echoes of Aristotle. From these echoes, Sgarbi concludes that the "predominant . . . scientific method" (226) in the days of Gilbert, Bacon, Galileo, Harvey, Boyle, Leeuwenhoek, Hooke, and Isaac Newton was not a confident experimentalism but a skeptical empiricism that would find maturity in Locke, Berkeley, and Hume. The book's back-cover blurb rightly calls the proposal "radical."

Sgarbi's project takes its beginning from John Herman Randall's 1940 proposal that the scientific revolution, and especially the work of Galileo, was enabled by an empirical scientific method developed and promoted by Jacopo Zabarella (1533–89), the leading Aristotelian commentator of his generation, working at the leading center of scientific study, the University of Padua. Randall's thesis has been the subject of lively debate, but Sgarbi insists that "in its weak form, Randall's thesis remains cogent" (4). The weak form does not claim

a direct influence on Galileo but merely "certain conceptual analogies" (4) between "Paduan Aristotelians" and early scientists. Sgarbi's first chapter presents the Randall thesis, reviews the literature it has spawned, and registers his own agreement with Randall's essential claim. A chronological narrative, across nine chapters, follows. A short concluding chapter summarizes Sgarbi's claim.

To follow Sgarbi's narrative, it is crucial to recognize that by "empiricism" he does not mean the experimental method of Galileo that Randall was giving Zabarella credit for. Sgarbi means the skeptical empiricism of Locke, Berkeley, and Hume (10–11), what Sgarbi summarizes as follows: (*a*) All knowledge comes from sense experience; there is no innate knowledge. (*b*) It is by induction, not deduction, that we acquire the principles of knowledge. (*c*) We are cut off from knowing the world as it really is; we know only our perceptions. (*d*) Abstract thought is not objective, it is not of the world; it is subjective, it is of the perceptions.

Sgarbi, following so many others since Kant, presumes that *c* and *d* naturally follow from *a* and *b*. But Galileo, Francis Bacon, William Harvey, Robert Boyle—basically all early modern scientists—thought the opposite. They thought that by following proper standards of experimental inquiry, we can know the world as it really is. Sgarbi appears unaware or dismissive of such schools of thought. He blithely moves between *a*, *b*, *c*, and *d*, presuming that evidence for one of these in a writer is evidence for all of them. If Sgarbi says some writer is committed to the subjective nature of knowledge, he means the writer thinks all knowledge is based on sensation and induction. And vice versa. And a writer committed to sensation and induction must be or at least should be committed, Sgarbi presumes, to an inability to know the world as it really is; a writer disavowing innate ideas is one committed to the subjectivity of knowledge. For Sgarbi, sense experience and induction go hand-in-hand with subjectivity and skepticism.

Sgarbi's project, then, is the opposite of Randall's. Randall's was to show that Zabarella's commitment to sense experience and induction led to the experimental methods of early modern science, that is, led to a confidence that we could know the natural world exactly and precisely as it is. But Sgarbi does not think that Zabarella had an experimental method (77) and presumes it would not matter if he did. What matters is that British Aristotelians took from Zabarella all his talk about sensation and experience and that this talk was the background that made possible and natural the rise of the skeptical and subjective empiricism of Locke, Berkeley, and Hume.

Zabarella claimed to be an Aristotelian and accordingly claimed that all knowledge comes by sense perception. And he gave some role to induction. But he was no Baconian or Galilean experimentalist. For Zabarella, induction was al-

ways a kind of deduction, made valid not by any experimental compare-and-contrast but by the forcefulness of the knower's insight. You observe some instances, you think more about them, and then by light of the conclusion itself the intellect recognizes the universal provided by sense experience, that what is true of the observed is true of all. By examining Zabarella's views on primary and secondary notions, Sgarbi concludes that for Zabarella, "*that* the world *is*, is a matter of fact, but *how* the world *is* depends entirely on . . . logic" (76, Sgarbi's emphases). That is, existence of the world is a given, but its identity is provided by one's mind. So yes, Sgarbi is right that Zabarella was no experimentalist. Indeed Zabarella's *On Methods* was from beginning to end an attack on the newfangled experimental methods used by his colleagues teaching medicine at the University of Padua (see "Introduction," in *On Methods* and *On Regressus* [Cambridge, MA: Harvard University Press, 2013]).

This last fact highlights a big error Sgarbi makes. He continues to equate Zabarella's thought with "Paduan Aristotelianism." But Zabarella and the medical faculty were in a battle for influence, resources, and students, and they were fighting over whose interpretation of Aristotle was correct—the experimental interpretation of Fabricius or the Neoplatonic scholastic interpretation of Zabarella.

In general, the narrative chapters in Sgarbi's book after the one on Zabarella are carelessly executed, and their conclusions hastily drawn. The first one (chap. 5), on Richard Stanyhurst, Everard Digby, and John Case, begins with the claim that "it is hard to say" (79) whether any of these three were "acquainted" with Zabarellan logic but then ends with a section on Zabarella's influence on Case. Digby is described as having made "the empirical part of the cognitive process the central point of his scientific method" (92). That is wrong. The central part of Digby's system was "the great and almost mystical beginnings of knowledge" (the very first page of Digby's *Theoria Analytica*). In chapter 6, Giulio Pace's *Institutiones Logicae* is described as summarizing "the entirety of Zabarellan logic." Yes, this textbook is Aristotelian, but it is not distinctively Zabarellan at all. In chapter 8, Sgarbi treats the fact that Brerewood's *Elementa Logicae* "contains an important chapter on induction" as "good evidence that induction was a fundamental problem for logicians of the period" (152). But that chapter is in the same location (next to ones on enthymeme and example) and of comparable relative length and content as nearly all logic textbooks going back to Peter of Spain's thirteenth-century *Tractatus*. And it does not treat induction as a "problem."

Two-thirds of Sgarbi's book, from the chapter after the one on Zabarella to nearly the end, follows a pattern. Sgarbi introduces some textbook or treatise on logic, summarizes a few sections that mention sense perception or in-

duction or first and second notions, and chalks this up as evidence that Zabarellan Aristotelianism was the background to the empiricism of Locke, Berkeley, and Hume. An anonymous appendix added to the 1662 printing of Philippe Du Trieu's unoriginal *Manudictio ad logicam* has sensation as "the efficient cause of intellectual knowledge." Sgarbi's take: "This treatise *proves* the extent to which Zabarellan ideas, mediated by the British Aristotelians, were disseminated in the logic of the second half of the seventeenth century" (208, my emphasis). A 1671 logic textbook by one John Newton "is a summary of the British Aristotelian positions of the first half of the seventeenth century and shows how deeply Zabarella's ideas had become rooted in British logic" (212). The 1679 *Institutio Logicae*, by one Narcissus Marsh, has a section that could have come from any commentary on *Posterior Analytics* B 19 of the previous 4 centuries. But to Sgarbi this unoriginal, old-fashioned textbook makes "clear, then, that by 1680 Aristotelianism, and one with a Paduan slant, offered the *predominant theory of knowledge and scientific method* in the British Isles" (226, my emphasis).

Sgarbi takes marginal, conservative, and conventional logic textbooks as better evidence of the period's "predominant theory of scientific method" than the protestations of practicing scientists such as Robert Boyle, William Harvey, Robert Hooke, Antoni van Leeuwenhoek, or a few dozen other luminaries. Sgarbi proves something he set out to prove—that wherever you look in seventeenth-century books on logic, you find use of Aristotelian terminology. But that is just not saying much. It certainly does not rescue any form of the Randall thesis, weak or strong. Yes, Everard Digby's extremely mystical philosophy and Francis Bacon's experimental one both take as reference some Aristotelian vocabulary and framework. But those two philosophies are a chasm apart. A belief that sensation is the foundation of knowledge can be held, at one extreme, by a Berkeleian skeptic and, on the other, by a scientific experimentalist. And many themes in Zabarella that Sgarbi cites as central to Paduan Aristotelianism are just not shared by all the influential Aristotelians at Padua. Many of those themes are not even distinctly Paduan or even Renaissance.

Now maybe positions central to Jacopo Zabarella really do become important and characteristic in the skeptical doctrine of British empiricism. I suspect so. But Sgarbi makes no such case. He never discusses Locke or Berkeley or Hume, or how Zabarella's positions imply the empiricists'. Sgarbi just shows that in the century before Locke's *Essay Concerning Human Understanding* many writers mentioned induction and many claimed that knowledge must rely somehow on sense experience. An attempt to revive Randall's thesis needs more than that.

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